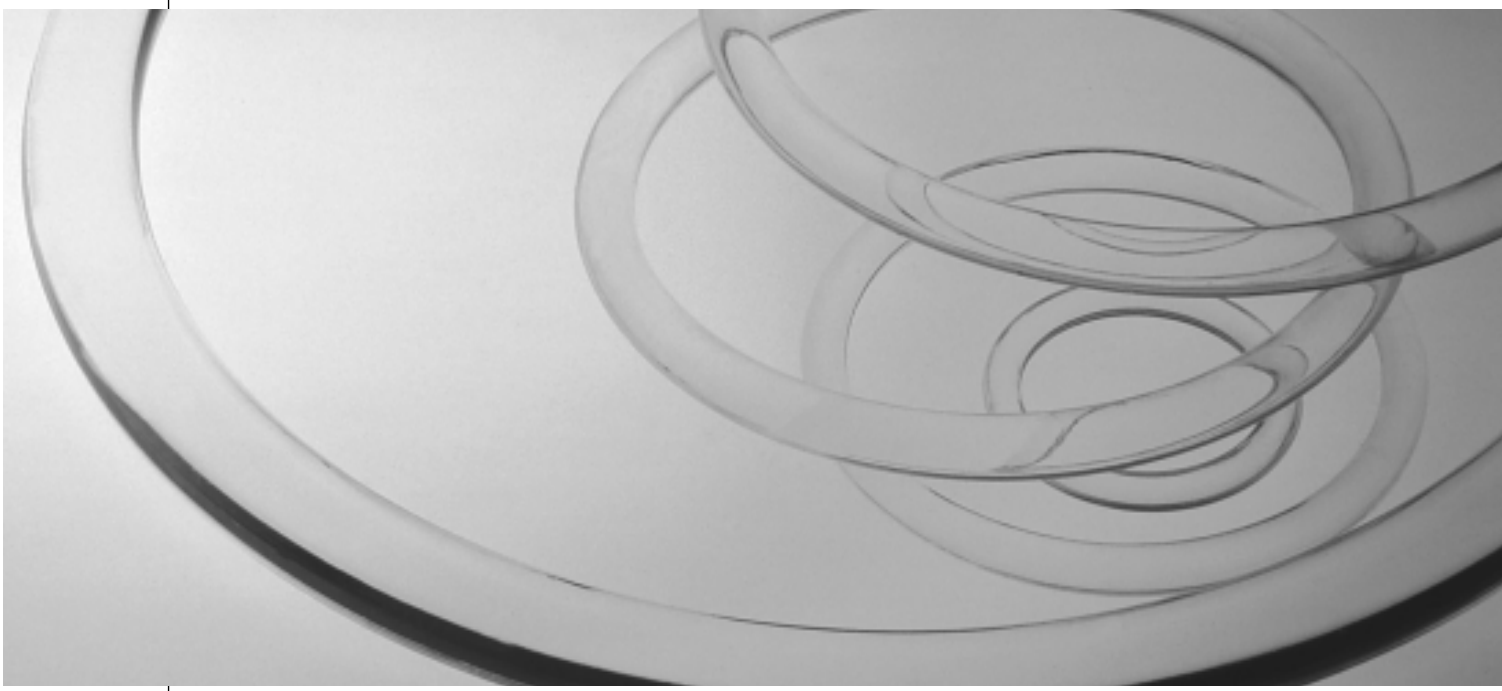
Mars.book Page 1 Wednesday, October 18, 2000 2:22 PM

3com

OfficeConnect®

Dual Speed Switch 5 plus (3C16790)
Dual Speed Switch 8 plus (3C16791)
Dual Speed Switch 16 plus (3C16792)

User Guide



Downloaded from www.Manualslib.com manuals search engine

3Com Corporation ■ 5400 Bayfront Plaza ■ Santa Clara, California ■ 95052-8145

Copyright © 2001, 3Com Technologies. All rights reserved.

No part of this documentation may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from 3Com Technologies.

3Com Technologies reserves the right to revise this documentation and to make changes in content from time to time without obligation on the part of 3Com Technologies to provide notification of such revision or change.

3Com Technologies provides this documentation without warranty, term, or condition of any kind, either implied or expressed, including, but not limited to, the implied warranties, terms or conditions of merchantability, satisfactory quality, and fitness for a particular purpose. 3Com may make improvements or changes in the product(s) and/or the program(s) described in this documentation at any time.

If there is any software on removable media described in this documentation, it is furnished under a license agreement included with the product as a separate document, in the hard copy documentation, or on the removable media in a directory file named LICENSE.TXT or !LICENSE.TXT. If you are unable to locate a copy, please contact 3Com and a copy will be provided to you.

UNITED STATES GOVERNMENT LEGEND

If you are a United States government agency, then this documentation and the software described herein are provided to you subject to the following:

All technical data and computer software are commercial in nature and developed solely at private expense. Software is delivered as "Commercial Computer Software" as defined in DFARS 252.227-7014 (June 1995) or as a "commercial item" as defined in FAR 2.101(a) and as such is provided with only such rights as are provided in 3Com's standard commercial license for the Software. Technical data is provided with limited rights only as provided in DFAR 252.227-7015 (Nov 1995) or FAR 52.227-14 (June 1987), whichever is applicable. You agree not to remove or deface any portion of any legend provided on any licensed program or documentation contained in, or delivered to you in conjunction with, this User Guide.

Unless otherwise indicated, 3Com registered trademarks are registered in the United States and may or may not be registered in other countries.

3Com and OfficeConnect are registered trademarks of 3Com Corporation. The 3Com logo is a trademark of 3Com Corporation

Microsoft, MS-DOS, Windows, and Windows NT are registered trademarks of Microsoft Corporation. Novell and NetWare are registered trademarks of Novell, Inc.

All other company and product names may be trademarks of the respective companies with which they are associated.

The OfficeConnect Dual Speed Switches are covered by a lifetime limited warranty, which also includes the power adapter. To qualify for the warranty, you must submit a registration card or register on-line at **http://support.3com.com/registration/frontpg.pl**. The OfficeConnect Dual Speed Switches are covered by a free 90-day telephone support.

The lifetime limited warranty is not offered where restricted or prohibited by law.

Please e-mail any comments about this document to 3Com at: **pddtechpubs_ comments@3Com.com.** Please include the document title (OfficeConnect Dual Speed Switch 5 plus, Switch 8 plus, Switch 16 plus User Guide), part number (DUA1679-0AAA03) and if appropriate, the page number.

Downloaded from www.Manualslib.com manuals search engine

Introduction 4

Creating your Network 5
- Dual Speed Switch 5 plus—Front 5
- Dual Speed Switch 8 plus—Front 6
- Dual Speed Switch 16 plus—Front 7
- Dual Speed Switch 16 plus—Rear 8

How the Switch Can Be Used 9
- Switching 9
- Connecting 10BASE-T and 100BASE-TX Networks 10

Before You start 10
- Unit Connections 10
- Worksation Connections 10
- Twisted Pair (TP) Cables 10

Stacking the Units Together 11
- The Rubber Feet 11
- The Stacking Clip 11

Positioning Your Switch 12

Securing Your Switch 12

Connecting Workstations and Other Equipment to Your Switch 13
- Connecting OfficeConnect Units to Your Switch 13
- Checking Unit Connections 14
- Spot Checks 14

Problem Solving 15

Networking Terminology 17

Dimensions and Standards 19

Dimensions and Operating Conditions 19

Standards 19

Environmental Statements 20
- End Of Life Statement 20
- Regulated Materials Statement 20
- Environmental Statement about the Documentation 20
- Environmental Statement about the Product Packaging 20

Important Safety Information 21

Wichtige Sicherheitshinweise 22

Consignes importantes de sécurité 23

Online Technical Services 24

World Wide Web Site 24

3Com Knowledgebase Web Services 24

Technical Support 24

Support from Your Network Supplier 25

Support from 3Com 25

Returning Products for Repair 27

3Com Corporation Limited Warranty 29

Regulatory Notices 31

Downloaded from www.Manualslib.com manuals search engine

INTRODUCTION

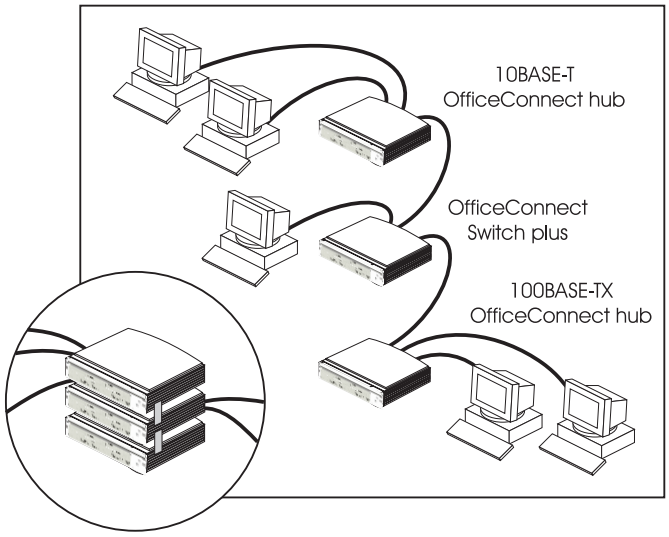
Welcome to the world of networking with 3Com®. In the modern business environment, communication and sharing information is crucial. Computer networks have proved to be one of the fastest modes of communication but until recently, only large businesses could afford the networking advantage. The OfficeConnect® product range from 3Com has changed this, bringing networks to the small office.

As the power of workstations and business applications increases, heavier demands are made on the available network bandwidth that if unchecked, can lead to performance problems in a hub-based setup. Installing the OfficeConnect Dual Speed Switch 5 plus (3C16790), Switch 8 plus (3C16791) or Switch 16 plus (3C16792) allows your network to be segmented so that traffic can be contained effectively, reducing the overall load without affecting access to critical resources.

This guide will use the term 'Switch' when referring to the Dual Speed Switch 5 plus, Switch 8 plus or Switch 16 plus.

The Switch is ideal for use with other OfficeConnect products, as shown in Figure 1. It is compact and attractively designed for desktop use. The Switch is part of the OfficeConnect range which neatly stack together with the OfficeConnect Stacking Clip.

Figure 1 Small Network with OfficeConnect Dual Speed Switch plus (Circle Shows Units Clipped Together)



This Switch has five, eight or sixteen 10/100BASE-TX ports. This allows you to set up a network with both 10BASE-T and 100BASE-TX hubs and workstations.

Downloaded from www.Manualslib.com manuals search engine

CREATING YOUR NETWORK

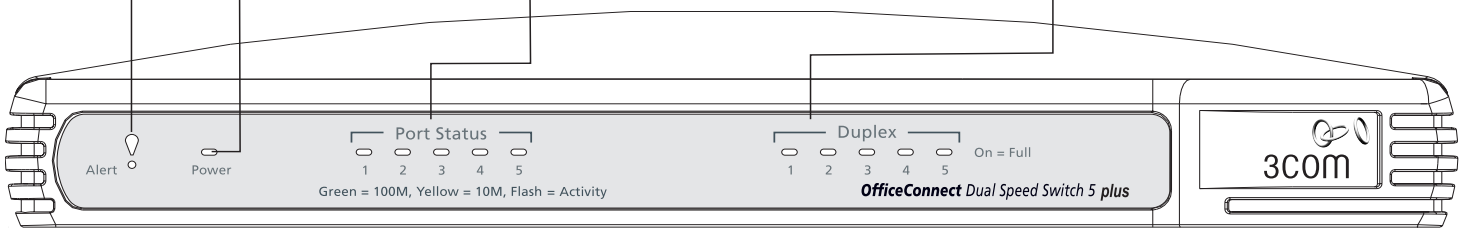
Dual Speed Switch 5 plus—Front

Alert LED
If the **Alert LED** is off, the unit is operating correctly.
After power on, the Alert LED remains lit (orange) for a short period of time while performing a self test. If it is continuously lit there may be a problem. Refer to the "Problem Solving" section.

Power LED
If the **Power LED** is lit (*green*), the power supply to the Switch is present.

Port Status and Activity LEDs
If the **Port Status LED** is off there is nothing connected to the port, or the connected device is turned off or there may be a problem with the connectivity (refer to the "Problem Solving" section). If the LED is green the speed of the link to the connected device is at 100 Mbps (100BASE-TX). If the LED is yellow the speed of the link to the connected device is at 10 Mbps (10BASE-T). The LED will flash to indicate traffic is passing through that port.

Duplex LED's
If the Duplex LED is lit (yellow), the port is in full duplex mode. If the LED is off, the port is in half duplex mode.



Downloaded from www.Manualslib.com manuals search engine

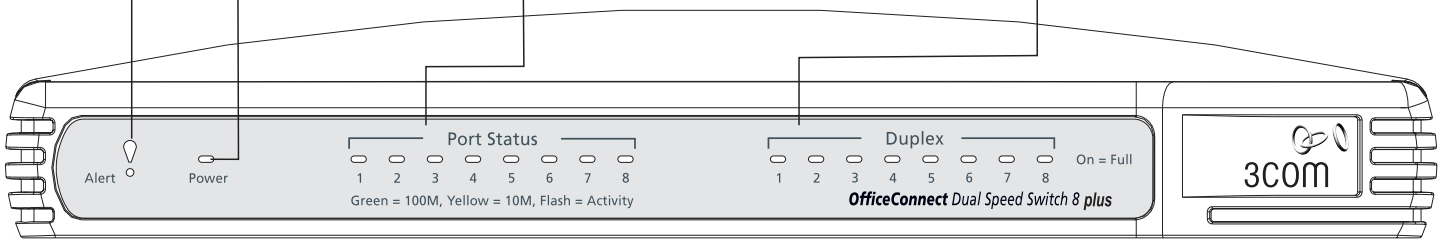
Dual Speed Switch 8 plus—Front

Alert LED
If the **Alert LED** is off, the unit is operating correctly.
After power on, the Alert LED remains lit (orange) for a short period of time while performing a self test. If it is continuously lit there may be a problem. Refer to the "Problem Solving" section.

Power LED
If the **Power LED** is lit (*green*), the power supply to the Switch is present.

Port Status and Activity LEDs
If the **Port Status LED** is off there is nothing connected to the port, or the connected device is turned off or there may be a problem with the connectivity (refer to the "Problem Solving" section). If the LED is green the speed of the link to the connected device is at 100 Mbps (100BASE-TX). If the LED is yellow the speed of the link to the connected device is at 10 Mbps (10BASE-T). The LED will flash to indicate traffic is passing through that port.

Duplex LEDs
If the Duplex LED is lit (yellow), the port is in full duplex mode. If the LED is off, the port is in half duplex mode.


Alert
Power
Port Status
1 2 3 4 5 6 7 8
Green = 100M, Yellow = 10M, Flash = Activity
Duplex
1 2 3 4 5 6 7 8
On = Full
OfficeConnect Dual Speed Switch 8 plus
3com

Downloaded from www.Manualslib.com manuals search engine

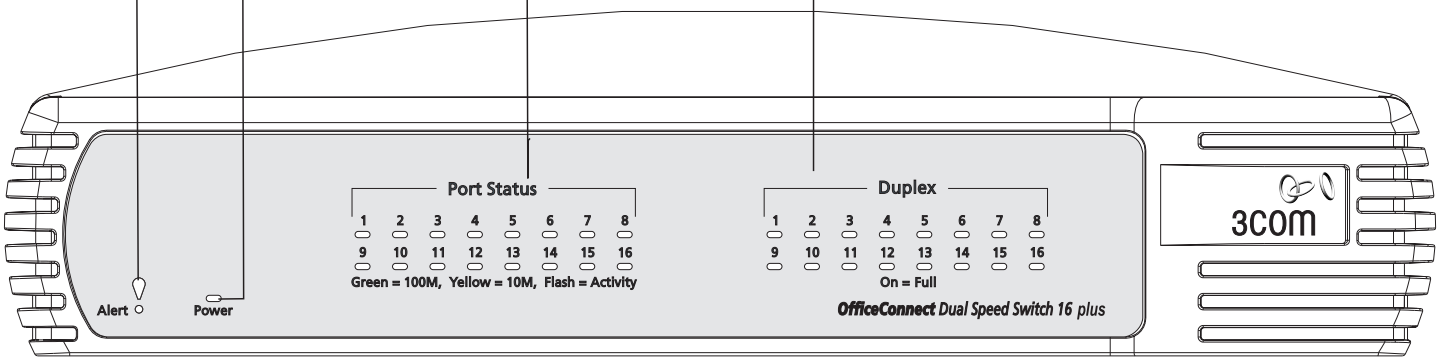
Dual Speed Switch 16 plus—Front

Alert LED
If the **Alert LED** is off, the unit is operating correctly.
After power on, the Alert LED remains lit (orange) for a short period of time while performing a self test. If it is continuously lit there may be a problem. Refer to the "Problem Solving" section.

Power LED
If the **Power LED** is lit (*green*), the power supply to the Switch is present.

Port Status and Activity LEDs
If the **Port Status LED** is off there is nothing connected to the port, or the connected device is turned off or there may be a problem with the connectivity (refer to the "Problem Solving" section). If the LED is green the speed of the link to the connected device is at 100 Mbps (100BASE-TX). If the LED is yellow the speed of the link to the connected device is at 10 Mbps (10BASE-T). The LED will flash to indicate traffic is passing through that port.

Duplex LEDs
If the Duplex LED is lit (yellow), the port is in full duplex mode. If the LED is off, the port is in half duplex mode.

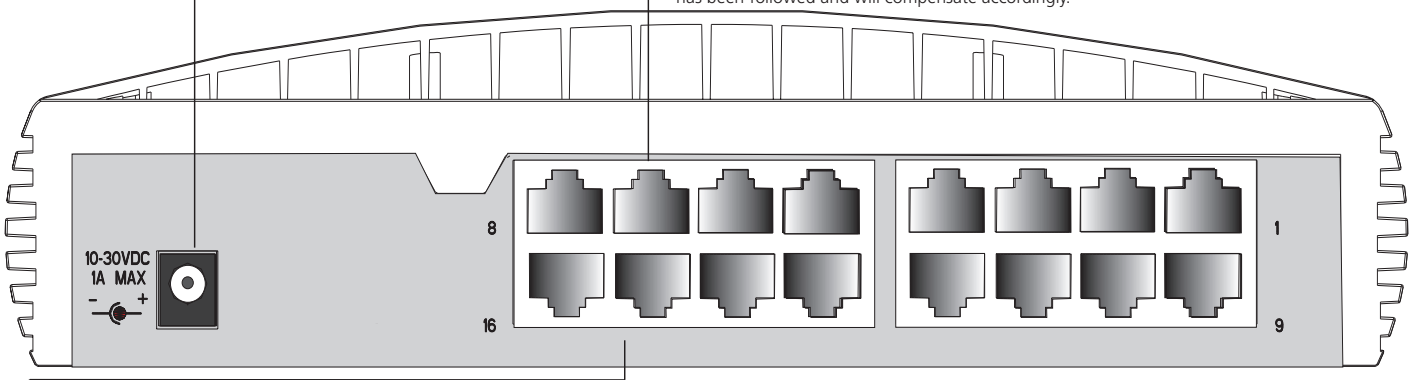

Port Status
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
Green = 100M, Yellow = 10M, Flash = Activity
Duplex
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16
On = Full
Alert
Power
3com
OfficeConnect Dual Speed Switch 16 plus

Downloaded from www.Manualslib.com manuals search engine

Dual Speed Switch 16 plus—Rear

Power Adapter socket
Only use the power adapter that is supplied with this OfficeConnect Switch. Do not use any other adapter.

10/100BASE-TX ports
Use suitable TP cable with RJ-45 connectors. You can connect the OfficeConnect Switch to any workstation or OfficeConnect hub that has a 10BASE-T, 100BASE-TX or 10/100BASE-TX port. Each port is capable of auto-negotiating for 10 Mbps or 100 Mbps operation. All ports have an automatic MDI / MDIX feature, which means either a 'straight through' or 'crossover' UTP cable can be used to connect to any port. The switch will automatically detect which wiring practice has been followed and will compensate accordingly.



WARNING: RJ-45 ports. *These are shielded RJ-45 data sockets. They cannot be used as standard traditional telephone sockets, or to connect the unit to a traditional PBX or public telephone network. Only connect RJ-45 data connectors, network telephony systems, or network telephones to these sockets. Either shielded or unshielded data cables with shielded or unshielded jacks can be connected to these data sockets.*

WARNHINWEIS: RJ-45-Anschlüsse *Diese Porte sind geschützte Datensteckdosen. Sie dürfen weder wie normale traditionelle Telefonsteckdosen noch für die Verbindung der Einheit mit einem traditionellem privatem oder öffentlichem Telefonnetzwerk gebraucht werden. Nur RJ-45-Datenanscluße, Telefonnetzsysteme or Netztelefone an diese Steckdosen anschließen. Entweder geschützte oder ungeschützte Buchsen dürfen an diese Datensteckdosen angeschlossen werden.*

AVERTISSEMENT: Ports RJ-45. *Ceux-ci sont protégés par des prises de données. Ils ne peuvent pas être utilisés comme prises de téléphone conventionnelles standard, ni pour la connection de l'unité à un réseau téléphonique central privé ou public. Raccorder seulement connecteurs de données RJ-45, systèmes de réseaux de téléphonie ou téléphones de réseaux à ces prises. Il est possible de raccorder des câbles protégés ou non protégés avec des jacks protégés ou non protégés à ces prises de données.*

Downloaded from www.Manualslib.com manuals search engine

How the Switch Can Be Used

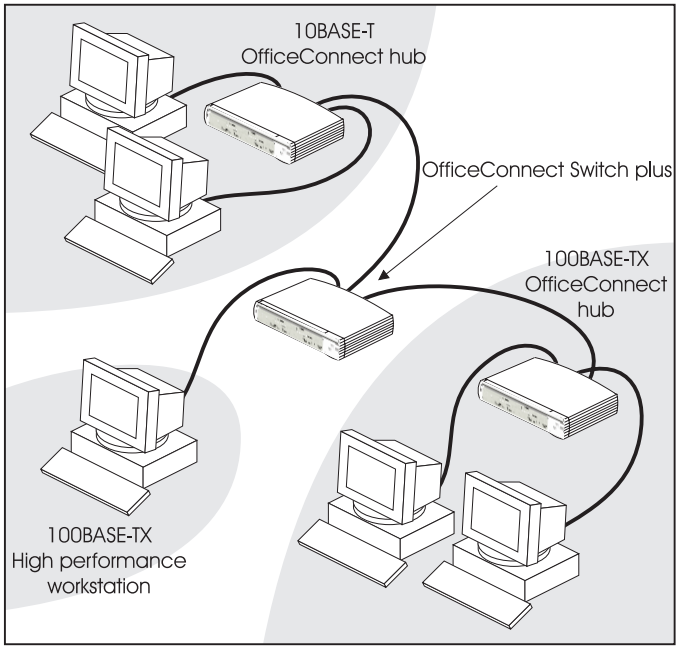
Switching

When a network of repeater hubs is in operation, any information that is sent by the workstations is passed around the whole network (regardless of the destination of the information). This can result in a lot of unnecessary traffic that can slow the network down. The Switch solves this problem because it 'listens' to the network and automatically learns what workstations can be reached through its ports. It can then selectively pass on any information by transmitting the traffic from the relevant port only (instead of all ports like a repeater hub). This operation is called 'switching'.

The Switch effectively divides up your network, localizing the network traffic and passing on traffic as necessary (as shown in Figure 2). If you have workstations that communicate frequently in the same part of the network, traffic between them is not passed on unnecessarily to the remainder of the network, thereby reducing the load. If you have any high performance workstations that require a lot of bandwidth, connect them directly to the Switch.

The Switches have a built in feature to aid network performance at times of excessive load. It is called Priority Queuing. When a packet is received, the Switch will examine it to see if it has been priority encoded. If it has, the Switch will then read the priority level and determine whether it should be directed through the normal or high priority channel. This feature can be useful, for example, during excessive loads when one type of traffic may require priority over another. The Switch is configured to to comply with VLAN priority tagged frames and IP TOS / DSCP priority encoded frames.

Figure 2 The Switch Separates Your Network and Controls the Information Effectively



Downloaded from www.Manualslib.com manuals search engine

Connecting 10BASE-T and 100BASE-TX Networks

The 10/100 ports can each be connected to either a 10BASE-T or 100BASE-TX network. If you have both types of network, you can join them together using the Switch allowing all your workstations to communicate. Alternatively, if you use 10BASE-T and want to improve network performance by introducing 100BASE-TX technology, the Switch protects your existing workstations because it maintains 10BASE-T connections to them.

Before You start

Your OfficeConnect Dual Speed Switch plus comes with:

- One power adapter for use with the Switch.
- Four rubber feet.
- A stacking clip.

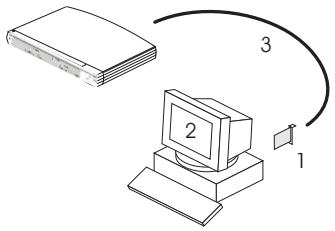
Unit Connections

To connect OfficeConnect units (such as hubs and other switches) to your Switch, you need:

- One suitable TP cable for each unit.

Worksation Connections

To connect workstations or other equipment (such as servers) directly to your Switch, you need:



1 One 10BASE-T, 100BASE-TX or 10/100BASE-TX adapter card for each workstation. 3Com produce a range of easy to install network adapters, which provide your workstation with a 10BASE-T or 100BASE-TX connection.

2 An operating system (for example, NetWare or Windows 95/98) with network support configured, running on your workstations.

3 One suitable twisted pair cable for each workstation.

Twisted Pair (TP) Cables

Cables can be shielded (screened) or unshielded; we recommend that you use shielded cable. Cables used for 100BASE-TX connections must be data grade (Category 5). The maximum length you can use is 100m (328ft).

Downloaded from www.Manualslib.com manuals search engine

Stacking the Units Together

The Rubber Feet

The four self-adhesive rubber feet prevent your switch from moving around on your desk. Only stick the feet to the marked areas at each corner of the underside of your switch if you intend to place the unit directly on top of the desk. Do not fix the feet if you are going to use the clip.

The Stacking Clip

The stacking clip allows you to stack your OfficeConnect units together neatly and securely.

> ***CAUTION:*** *You can stack up to a maximum of four units. Smaller units must be stacked above larger units.*

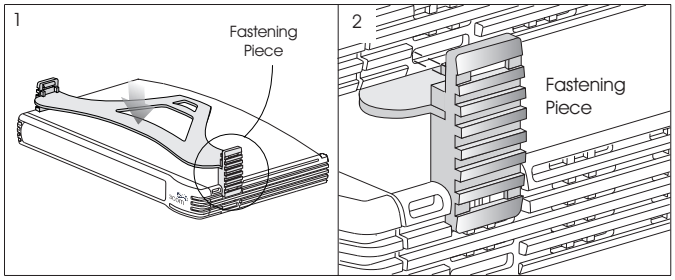
To fit the clip:

1. Place your unit on a flat surface.
2. Fit the clip across the top of the unit, as shown in Figure 3 (picture 1), ensuring that the longer sections of the fastening pieces are pointing downwards.
3. Align the fastening pieces over the slots found on each side of the unit.
4. Push the clip down gently to secure it, ensuring the fastening pieces snap into the slots on the unit.

To fit another unit:

1. Rest the second unit on top of the clip and align it with the front of the unit below.
2. Press down gently on the unit to secure it onto the clip, ensuring the fastening pieces fit into the slots on the unit below, as shown in Figure 3 (picture 2).

Figure 3 Stacking Your Units Together



To remove the clip:

1. Remove the top unit together with the clip. If you hook a finger around one of the the fastening pieces and then pull it gently from out of the slot, the clip should come away with the upper unit attached to it.
2. Push the clip in the center, so it bends towards the base of the unit, and then separate once the clip is loose.

Downloaded from www.Manualslib.com manuals search engine

Positioning Your Switch

When installing your Switch, ensure:

- It is out of direct sunlight and away from sources of heat.
- Cabling is away from power lines, fluorescent lighting fixtures, and sources of electrical noise such as radios, transmitters and broadband amplifiers.
- Water or moisture cannot enter the case of the unit.
- Air flow around the unit and through the vents in the side of the case is not restricted. We recommend you provide a minimum of 25mm (1in.) clearance.

Securing Your Switch

There are two slots on the underside of the OfficeConnect Switch that can be used for wall mounting. It is recommended that you mount the Switch with the LEDs facing upwards to prevent dust entering the cooling vents.

When wall mounting the unit, ensure that it is within reach of the power outlet.

You need two suitable screws. Ensure that the wall you are going to use is smooth, flat, dry and sturdy. Make two screw holes which are 150mm (5.9in.) apart for Switch 5 plus and Switch 8 plus, or 142mm (5.6in.) apart for Switch 16 plus. Use the guide on page 30 and 31 to mark the position of the holes. Fix the screws into the wall, leaving their heads 3mm (0.12in.) clear of the wall surface.

Remove any connections to the unit and locate it over the screw heads. When in line, gently push the unit on to the wall and move it downwards to secure. When making connections, be careful not to push the unit up and off the wall.

CAUTION: *Only wall mount single units, do not wall mount stacked units.*

Also available from 3Com, is the OfficeConnect Mounting Unit (part number 3C16765). This allows you to firmly secure a stack of OfficeConnect devices to the desktop or onto a shelf in a rack.

Downloaded from www.Manualslib.com manuals search engine

Connecting Workstations and Other Equipment to Your Switch

WARNING: *Please read the 'Important Safety Information' section before you start.*

WARNHINWEIS: *Bitte lesen Sie den Abschnitt 'Wichtige Sicherheitsinformationen' sorgfältig durch, bevor Sie das Gerät einschalten.*

AVERTISSEMENT: *Veuillez lire attentivement la section "Consignes importantes de sécurité" avant de mettre en route.*

CAUTION: *Do not power the Switch off and on quickly. Wait about five seconds between power cycles.*

10BASE-T cables are very easy to use. To connect a 10BASE-T cable, simply slot the connector into the relevant RJ-45 port. When the connector is fully in, its latch locks it into place. To disconnect the cable, push the connector's latch in and remove it.

When a TP cable is connected to the Switch at one end and a workstation other equipment at other and both unit are powered, the Switch will automtically detect whether a 'straight ' or 'Crossover' cable is being used and will compensate if required. The units will then 'Auto negotiate' to determine the fastest possible link speed between them. This may take a few seconds and the outcome will be reflected in the LED's on the front of the Switch.

If the equipment connected to the Switch does not support auto-negotiation or if it has been disabled, it must be configured to operate in half duplex mode.

The Switch detects all port connections, so you can start using your network immediately. If you need more ports, simply add another OfficeConnect unit.

Connecting OfficeConnect Units to Your Switch

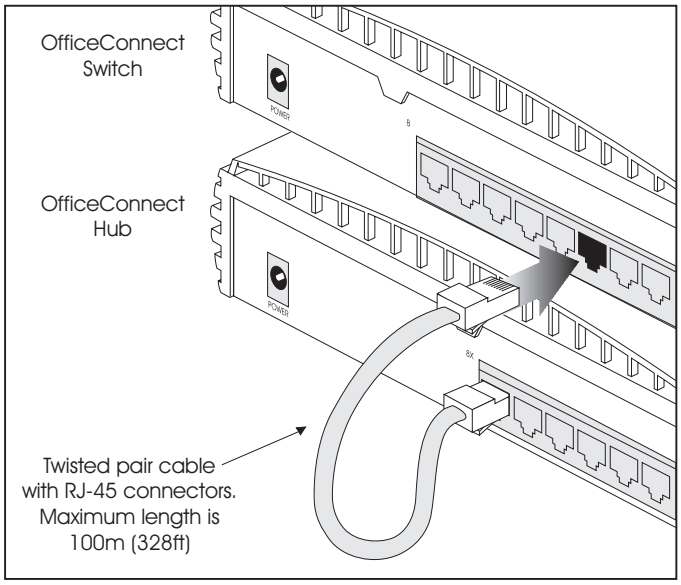
You can increase the number of workstations that can connect to your network by adding OfficeConnect units (such as hubs and other switches). You can connect either a 10BASE-T or a 100BASE-TX OfficeConnect unit to each port of the Switch.

Downloaded from www.Manualslib.com manuals search engine

Checking Unit Connections

When you have connected all your units, power on the units and the Switch. The Port Status LEDs for the ports you have used on both the units and the Switch should be on. If they are not, check your connections.

Figure 4 Correct Connections for an OfficeConnect Hub



There is no uplink/normal push switch that is usually associated with OfficeConnect products. Instead the product has an automatic MDI / MDIX (Media Dependant Interface) feature, which means either a 'straight through' or 'crossover' UTP cable can be used in any Switch port to make the connection to other switches, hubs and workstations. The switch will automatically detect which wiring practice has been followed and will compensate accordingly.

Spot Checks

At frequent intervals, visually check that:

- The Alert LED is off — this is the best way to find out if there are problems with your network.
- Case vents are not obstructed.
- Cabling is secure and not pulled taut.

Downloaded from www.Manualslib.com manuals search engine

PROBLEM SOLVING

The Switch has been designed to aid you when detecting and solving possible problems with your network. These problems are rarely serious; the cause is usually a disconnected or damaged cable, or incorrect configuration. If this section does not solve your problem, contact your supplier for information on what to do next.

Perform these actions first:

- Ensure all network equipment is powered on.
- Power each piece of network equipment off, wait about 5 seconds and then power each one on.

Check the following symptoms and solutions:

Power LED not lit. Check your power adapter connection. If there is still no power, you may have a faulty power adapter which needs replacing with another OfficeConnect power adapter. **Do not use any other power adapter with the Switch.**

Port Status LED not lit for a port that has a TP cable connected. After connection it may take several seconds for the port status LED's to illuminate. The port status LED should turn Green or Yellow for each port that is connected. The Duplex LED may or may not illuminate.

Please refer to pages 5, 6 and 7 'Creating your Network' for a full description of the LED's.

If the Port Status LED has not lit after several seconds, ensure the connected device is powered, the TP cable is not damaged and that it is correctly inserted at both ends.

You may find a TP cable works when connected to the Switch but doesn't if it is disconnected from the Switch and connected to a different piece of equipment. This may be due to the advanced automatic MDI / MDIX feature of the Switch that the other equipment may not have.

Alert LED continuously lit. Power down the Switch and disconnect all network connections. Wait about 5 seconds and power the Switch back up. If the Alert LED is continuously lit it can mean there is a problem with your Switch. The 5, 8 and 16 port Switches will also turn the Alert LED on if there is a high level of broadcast traffic or the Switch detects a network loop. To determine whether this is the case, connect one network connection at a time, waiting a few seconds between each.

Downloaded from www.Manualslib.com manuals search engine

Network loop — Examine your connections and remove the loop. Each piece of equipment needs only one connection to your Switch.

Broadcast frames — Some pieces of network equipment operate by sending out broadcast frames regularly. Please refer to the documentation that accompanies the piece of network equipment.

Downloaded from www.Manualslib.com manuals search engine

NETWORKING TERMINOLOGY

A **Network** is a collection of workstations (for example, IBM-compatible PCs) and other equipment (for example, printers), connected for the purpose of exchanging information or sharing resources. Networks vary in size, some are within a single room, others span continents.

A **Local Area Network (LAN)** is a network, usually in an office, that spans no more than a single site.

Ethernet is a type of LAN, referring to the technology used to pass information around the network. It operates at 10Mbps (megabits per second).

Fast Ethernet is a type of LAN that runs up to 10 times faster than standard Ethernet. It operates at 100Mbps.

10BASE-T and **100BASE-TX** are the names given to the Ethernet protocol that runs over **Twisted Pair (TP)** cable. 10BASE-T runs at 10Mbps whilst 100BASE-TX operates at 100Mbps. The OfficeConnect Hubs and Switches Use RJ-45 type connectors to connect your TP network.

A **network loop** occurs when two pieces of network equipment are connected to each other by two seperate connections.

A **segment** is the length of cable connected to a port.

Packets are the units of information your workstations and other equipment send to each other over the network. A **frame** is the data part of the packet and can be **unicast** (sent to a single device), **multicast** (sent to multiple devices), or **broadcast** (sent to all devices).

Bandwidth refers to the amount of network traffic the network can hold at any one time (information capacity) measured in **bits per second (bps)**. Workstations or applications that use the network heavily are referred to as using high bandwidth. Fast Ethernet has a higher bandwidth than Ethernet, so it can cope with larger amounts of traffic, which results in faster operation.

Full duplex operation allows information to be transmitted and received simultaneously and, in effect, doubles the potential throughput of a link.

Downloaded from www.Manualslib.com manuals search engine

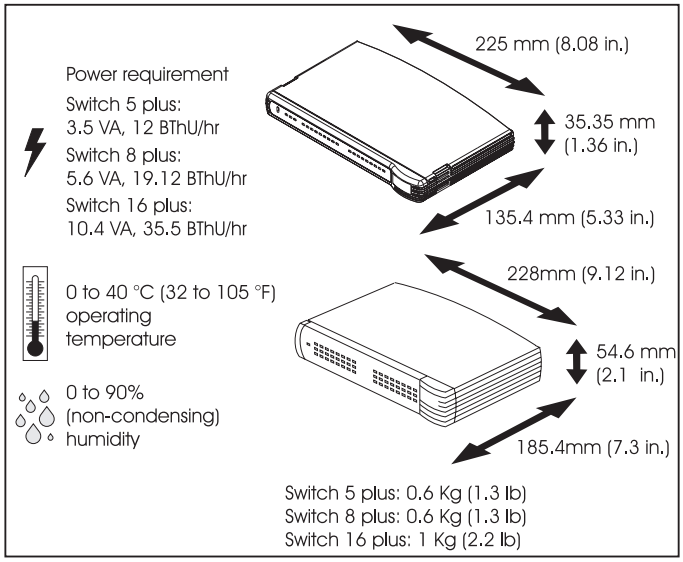
Priority Queuing is the ability of a network to give and maintain certain throughput levels for different applications depending on the priority assigned to that application. At excessive loads a packet with a higher priority will take a greater precedence over a lower prioritised packet.

Automatic MDI / MDIX this feature automatically detects which wiring practice that has been followed with regard to the TP cable, ie if the TP cable is a 'straight through' wired cable or a 'crossover' wired cable. The automatic MDI / MDIX feature within the Switch will detect and compensate accordingly.

Downloaded from www.Manualslib.com manuals search engine

DIMENSIONS AND STANDARDS

Dimensions and Operating Conditions



Standards

Functional:	ISO 8802/3 IEEE 802.3, 802.3u
Safety:	UL 1950, EN 60950 CSA 22.2 #950, IEC60950
EMC:	EN 55022 Class B EN 55024 FCC Part 15 Class B* ICES-003 Class B VCCI Class B CNS 13438 Class A
Environmental:	EN 60068 (IEC 68)

*Refer to "Regulatory Notices" on page 30 for conditions of operation.

Downloaded from www.Manualslib.com manuals search engine

ENVIRONMENTAL STATEMENTS

It is the policy of 3Com Corporation to be environmentally-friendly in all operations. To uphold our policy, we are committed to:

- Establishing environmental performance standards that comply with national legislation and regulations.
- Conserving energy, materials and natural resources in all operations.
- Reducing the waste generated by all operations.
- Ensuring that all waste conforms to recognized environmental standards.
- Maximizing the recyclable and reusable content of all products.
- Ensuring that all products can be recycled, reused and disposed of safely.
- Ensuring that all products are labelled according to recognized environmental standards.
- Improving our environmental record on a continual basis.

End Of Life Statement

3Com processes allow for the recovery, reclamation and safe disposal of all end-of-life electronic components.

Regulated Materials Statement

3Com products do not contain any hazardous or ozone-depleting material.

Environmental Statement about the Documentation

The documentation for this product is printed on paper that comes from sustainable, managed forests; it is fully biodegradable and recyclable, and is completely chlorine-free. The varnish is environmentally-friendly, and the inks are vegetable-based with a low heavy-metal content.

Environmental Statement about the Product Packaging

The packaging for this product is fully recyclable. It has a recycled (post consumer) waste content of at least 40% by weight, and no heavy-metal content.

Downloaded from www.Manualslib.com manuals search engine

IMPORTANT SAFETY INFORMATION

***WARNING**: Warnings contain directions that you must follow for your personal safety. Follow all directions carefully.*
You must read the following safety information carefully before you install or remove the unit:

- Exceptional care must be taken during installation and removal of the unit.
- Only stack the Switch with other OfficeConnect units.
- To ensure compliance with international safety standards, only use the power adapter that is supplied with the unit.
- The socket outlet must be near to the unit and easily accessible. You can only remove power from the unit by disconnecting the power cord from the outlet.
- This unit operates under SELV (Safety Extra Low Voltage) conditions according to IEC 950. The conditions are only maintained if the equipment to which it is connected also operates under SELV conditions.
- There are no user-replaceable fuses or user-serviceable parts inside the Switch. If you have a physical problem with the unit that cannot be solved with problem solving actions in this guide, contact your supplier.
- Disconnect the power adapter before moving the unit.

***WARNING: RJ-45 ports.** These are shielded RJ-45 data sockets. They cannot be used as telephone sockets. Only connect RJ-45 data connectors to these sockets.*

Downloaded from www.Manualslib.com manuals search engine

WICHTIGE SICHERHEITSHINWEISE

WARNHINWEIS: *Warnhinweise enthalten Anweisungen, die Sie zu Ihrer eigenen Sicherheit befolgen müssen. Alle Anweisungen sind sorgfältig zu befolgen.*
Sie müssen die folgenden Sicherheitsinformationen sorgfältig durchlesen, bevor Sie das Geräts installieren oder ausbauen:

- Bei der Installation und beim Ausbau des Geräts ist mit höchster Vorsicht vorzugehen.
- Stapeln Sie das Geräts nur mit anderen OfficeConnect Gerätes zusammen.
- Aufgrund von internationalen Sicherheitsnormen darf das Gerät nur mit dem mitgelieferten Netzadapter verwendet werden.
- Die Netzsteckdose muß in der Nähe des Geräts und leicht zugänglich sein. Die Stromversorgung des Geräts kann nur durch Herausziehen des Gerätenetzkabels aus der Netzsteckdose unterbrochen werden.
- Der Betrieb dieses Geräts erfolgt unter den SELV-Bedingungen (Sicherheitskleinstspannung) gemäß IEC 950. Diese Bedingungen sind nur gegeben, wenn auch die an das Gerät angeschlossenen Geräte unter SELV-Bedingungen betrieben werden.
- Es sind keine von dem Benutzer zu ersetzende oder zu wartende Teile in dem Gerät vorhanden. Wenn Sie ein Problem mit dem Switch haben, das nicht mittels der Fehleranalyse in dieser Anleitung behoben werden kann, setzen Sie sich mit Ihrem Lieferanten in Verbindung.
- Vor dem Ausbau des Geräts das Netzadapterkabel herausziehen.

WARNHINWEIS: RJ-45-Anschlüsse. *Dies sind abgeschirmte RJ-45-Datenbuchsen. Sie können nicht als Telefonanschlußbuchsen verwendet werden. An diesen Buchsen dürfen nur RJ-45-Datenstecker angeschlossen werden.*

Downloaded from www.Manualslib.com manuals search engine

CONSIGNES IMPORTANTES DE SÉCURITÉ

AVERTISSEMENT: *Les avertissements présentent des consignes que vous devez respecter pour garantir votre sécurité personnelle. Vous devez respecter attentivement toutes les consignes.*
Nous vous demandons de lire attentivement les consignes suivantes de sécurité avant d'installer ou de retirer l'appareil:

- Faites très attention lors de l'installation et de la dépose du groupe.
- Seulement entasser le moyer avec les autres moyeux OfficeConnects.
- Pour garantir le respect des normes internationales de sécurité, utilisez uniquement l'adaptateur électrique remis avec cet appareil.
- La prise secteur doit se trouver à proximité de l'appareil et son accès doit être facile. Vous ne pouvez mettre l'appareil hors circuit qu'en débranchant son cordon électrique au niveau de cette prise.
- L'appareil fonctionne à une tension extrêmement basse de sécurité qui est conforme à la norme CEI 950. Ces conditions ne sont maintenues que si l'équipement auquel il est raccordé fonctionne dans les mêmes conditions.
- Il n'y a pas de parties remplaceables par les utilisateurs ou entretenues par les utilisateurs à l'intérieur du moyeu. Si vous avez un problème physique avec le moyeu qui ne peut pas être résolu avec les actions de la résolution des problèmes dans ce guide, contacter votre fournisseur.
- Débranchez l'adaptateur électrique avant de retirer cet appareil.

AVERTISSEMENT: Ports RJ-45. *Il s'agit de prises femelles blindées de données RJ-45. Vous ne pouvez pas les utiliser comme prise de téléphone. Branchez uniquement des connecteurs de données RJ-45 sur ces prises femelles.*

Downloaded from www.Manualslib.com manuals search engine

TECHNICAL SUPPORT

3Com provides easy access to technical support information through a variety of services. This section describes these services.

Information contained in this section is correct at time of publication. For the most recent information, 3Com recommends that you access the 3Com Corporation World Wide Web site.

Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site.
- 3Com Knowledgebase Web Services.

World Wide Web Site

To access the latest networking information on the 3Com Corporation World Wide Web site, enter this URL into your Internet browser:

http://www.3com.com/

This service provides access to online support information such as technical documentation and software, as well as support options that range from technical education to maintenance and professional services.

3Com Knowledgebase Web Services

This interactive tool contains technical product information compiled by 3Com expert technical engineers around the globe. Located on the World Wide Web at:

http://knowledgebase.3com.com.

This service gives all 3Com customers and partners complementary, round-the-clock access to technical information on most 3Com products.

Downloaded from www.Manualslib.com manuals search engine

Support from Your Network Supplier

If you require additional assistance, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number.
- A list of system hardware and software, including revision levels.
- Diagnostic error messages.
- Details about recent configuration changes, if applicable.

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

- Product model name, part number, and serial number.
- A list of system hardware and software, including revision levels.
- Diagnostic error messages.
- Details about recent configuration changes, if applicable.

Downloaded from www.Manualslib.com manuals search engine

Here is a list of worldwide technical telephone support numbers. These numbers are correct at the time of publication. Refer to the 3Com Web site for updated information.

Country	Telephone Number
Asia, Pacific Rim	
Australia	1 800 678 515
Hong Kong	800 933 486
India	+61 2 9937 5085 or 000800 6501111
Indonesia	001 800 61 009
Japan	03 5783 1270
Malaysia	1800 801 777
New Zealand	0800 446 398
Pakistan	+61 2 9937 5083
Philippines	1235 61 266 2602
P.R. of China	10800 61 00137 or 021 6350 1590 or 00800 0638 3266
Singapore	800 6161 463
S. Korea	82 2 3455 6455
From anywhere in S. Korea:	00798 611 2230
From Seoul:	00798 611 2230
Taiwan, R.O.C.	0080 611 261
Thailand	001 800 611 2000
Europe, Middle East and Africa	
From anywhere in these regions, call:	+44 (0)1442 435529 phone +44 (0)1442 436722 fax
Europe and South Africa From the following countries, you may use the toll-free numbers:	
Austria	0800 297468
Belgium	0800 71429
Denmark	800 17309
Finland	0800 113153
France	0800 917959
Germany	0800 1821502
Hungary	06800 12813
Ireland	1800 553117
Israel	1800 9453794
Italy	800 8 79489
Luxembourg	0800 3625
Netherlands	0800 0227788
Norway	800 11376
Poland	00800 3111206
Portugal	0800 831416
South Africa	0800 995014
Spain	900 983125
Sweden	020 795482
Switzerland	0800 55 3072
U.K.	0800 966197
Latin America	
Brazil	0800 13 3266
Mexico	01 800 849CARE
Puerto Rico	800 666 5065
Central and South America	AT&T +800 998 2112
North America	1 800 NET 3Com (1 800 638 3266) Enterprise Customers: 1 800 876-3266

Downloaded from www.Manualslib.com manuals search engine

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain a Return Material Authorization (RMA) number. Products sent to 3Com without authorization numbers will be returned to the sender unopened, at the sender's expense.

To obtain an authorization number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	+ 65 543 6500	+ 65 543 6348
Europe, South Africa, and Middle East	Toll Free Number	+ 44 1442 432525
Central and South America	525 201 0075	
Argentina	0810 222 3266	
Bolivia	511 241 1691	
Brazil	0800 133266 or 55 11 5643 2700	
Caribbean	525 201 0004	
Chile	562 240 6200	
Colombia	525 201 0004	
Ecuador	525 201 0004	
Mexico	525 201 0004	
Paraguay	525 201 0004	
Peru	511 241 1691	
Uruguay	525 201 0004	
Venezuela	525 201 0004	

Country	Telephone Number	Fax Number
From the following countries, you may call the toll-free numbers; select option 2 and then option 2:		
Austria	0800 297468	
Belgium	0800 71429	
Denmark	800 17309	
Finland	0800 113153	
France	0800 917959	
Germany	0800 1821502	
Hungary	00800 12813	
Ireland	1800 553117	
Israel	1800 9453794	
Italy	1678 79489	
Netherlands	0800 0227788	
Norway	800 11376	
Poland	00800 3111206	
Portugal	0800 831416	
South Africa	0800 995014	
Spain	900 983125	
Sweden	020 795482	
Switzerland	0800 55 3072	
U.K.	0800 966197	
U.S.A. and Canada	1 800 NET 3Com (1 800 638 3266)	1 408 326 7120 (not toll-free)
	Enterprise Customers: 1 800 876 3266	

Downloaded from www.Manualslib.com manuals search engine

3Com Corporation LIMITED WARRANTY

3Com OfficeConnect Dual Speed Switch 5 plus, Switch 8 plus, Switch 16 plus

The duration of the warranty for the OfficeConnect Dual Speed Switch 5 plus (3C16790), Switch 8 plus (3C16791) and Switch 16 plus (3C16792) is lifetime, including the power adapter.

The OfficeConnect Dual Speed Switches are covered by a lifetime limited warranty, which also includes the power adapter. To qualify for the warranty, you must submit a registration card or register on-line at http://support.3com.com/registration/frontpg.pl. The OfficeConnect Dual Speed Switches are covered by a free 90-day telephone support.

The lifetime limited warranty is not offered where restricted or prohibited by law.

HARDWARE

3Com warrants this hardware product to be free from defects in workmanship and materials, under normal use and service, for the following length of time from the date of purchase from 3Com or its authorized reseller:

One (1) year (unless otherwise specified above)

3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, 3Com may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of 3Com. Replacement products may be new or reconditioned. 3Com warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

SOFTWARE

3Com warrants that each software program licensed from it will perform in substantial conformance to its program specifications, for a period of ninety (90) days from the date of purchase from 3Com or its authorized reseller. 3Com warrants the media containing software against failure during the warranty period. No updates are provided. 3Com's sole obligation under this express warranty shall be, at 3Com's option and expense, to refund the purchase price paid by Customer for any defective software product, or to replace any defective media with software which substantially conforms to applicable 3Com published specifications. Customer assumes responsibility for the selection of the appropriate applications program and associated reference materials. 3Com makes no warranty or representation that its software products will meet Customer's requirements or work in combination with any hardware or applications software products provided by third parties, that the operation of the software products will be uninterrupted or error free, or that all defects in the software products will be corrected. For any third party products listed in the 3Com software product documentation or specifications as being compatible, 3Com will make reasonable efforts to provide compatibility, except where the non-compatibility is caused by a "bug" or defect in the third party's product or from use of the software product not in accordance with 3Com's published specifications or user manual.

OBTAINING WARRANTY SERVICE

Customer must contact a 3Com Corporate Service Center or an Authorized 3Com Service Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from 3Com or its authorized reseller may be required. Products returned to 3Com's Corporate Service Center must be pre-authorized by 3Com with a Return Material Authorization (RMA) number marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. The repaired or replaced item will be shipped to Customer, at 3Com's expense, not later than thirty (30) days after 3Com receives the defective product.

Dead- or Defective-on-Arrival. In the event a product completely fails to function or exhibits a defect in materials or workmanship within the first forty-eight (48) hours of installation but no later than thirty (30) days after the date of purchase, and this is verified by 3Com, it will be considered dead- or defective-on-arrival (DOA) and a replacement shall be provided by advance replacement. The replacement product will normally be shipped not later than three (3) business days after 3Com's verification of the DOA product, but may be delayed due to export or import procedures. When an advance replacement is provided and Customer fails to return the original product to 3Com within fifteen (15) days after shipment of the replacement, 3Com will charge Customer for the replacement product, at list price.

3Com shall not be responsible for any software, firmware, information, or memory data of Customer contained in, stored on, or integrated with any products returned to 3Com for repair, whether under warranty or not.

ADDITIONAL SERVICES:
Telephone Support. This OfficeConnect product comes with telephone technical support for ninety (90) days. The ninety (90) day period begins on the date of Customer's product purchase.

The telephone technical support is available from 3Com from 9 a.m. to 5 p.m., local time, Monday through Friday, excluding local holidays. Telephone technical support is limited to the 3Com products designated above and may include assistance with installation, product specific configuration, and identification of equipment problems. Please refer to the Technical Support appendix in the User Guide for telephone numbers.

Response to requests for telephone technical support will be in the form of a return call from a 3Com representative by close of business the following business day.

To qualify for this 90 days of telephone technical support, you must register on the 3Com Web site at http://support.3Com.com/index.htm, and provide your date of purchase, product number, and serial number. 3Com reserves the right to modify or cancel this telephone support offering at any time, without advance notice. This offer is not available where prohibited or restricted by law.

3Com's Web and Bulletin Board Service are available at no charge, and provide software and firmware upgrades, a bug list, and technical information about 3Com products.

Downloaded from www.Manualslib.com manuals search engine

Warranties Exclusive

IF A 3COM PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, CUSTOMER'S SOLE REMEDY FOR BREACH OF THAT WARRANTY SHALL BE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM'S OPTION. TO THE FULL EXTENT ALLOWED BY LAW, THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDENCE WITH DESCRIPTION, AND NON-INFRINGEMENT, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. 3COM NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF ITS PRODUCTS.

3COM SHALL NOT BE LIABLE UNDER THIS WARRANTY IF ITS TESTING AND EXAMINATION DISCLOSE THAT THE ALLEGED DEFECT OR MALFUNCTION IN THE PRODUCT DOES NOT EXIST OR WAS CAUSED BY CUSTOMER'S OR ANY THIRD PERSON'S MISUSE, NEGLECT, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO OPEN, REPAIR OR MODIFY THE PRODUCT, OR ANY OTHER CAUSE BEYOND THE RANGE OF THE INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING, OTHER HAZARDS, OR ACTS OF GOD.

Limitation of Liability

TO THE FULL EXTENT ALLOWED BY LAW, 3COM ALSO EXCLUDES FOR ITSELF AND ITS SUPPLIERS ANY LIABILITY, WHETHER BASED IN CONTRACT OR TORT (INCLUDING NEGLIGENCE), FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF ITS PRODUCTS, EVEN IF 3COM OR ITS AUTHORIZED RESELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND LIMITS ITS LIABILITY TO REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM'S OPTION. THIS DISCLAIMER OF LIABILITY FOR DAMAGES WILL NOT BE AFFECTED IF ANY REMEDY PROVIDED HEREIN SHALL FAIL OF ITS ESSENTIAL PURPOSE.

Disclaimer

Some countries, states, or provinces do not allow the exclusion or limitation of implied warranties or the limitation of incidental or consequential damages for certain products supplied to consumers, or the limitation of liability for personal injury, so the above limitations and exclusions may be limited in their application to you. When the implied warranties are not allowed to be excluded in their entirety, they will be limited to the duration of the applicable written warranty. This warranty gives you specific legal rights which may vary depending on local law.

Governing Law

This Limited Warranty shall be governed by the laws of the State of California, U.S.A. excluding its conflicts of laws principles and excluding the United Nations Convention on Contracts for the International Sale of Goods.

3Com Corporation
5400 Bayfront Plaza
Santa Clara, CA 95054
(408) 326-5000

Downloaded from www.Manualslib.com manuals search engine

REGULATORY NOTICES

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules, and the Canadian Department of Communications Equipment Standards entitled, "Digital Apparatus," ICES-003. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.
- Consult the dealer or an experienced radio/television technician for help.

INFORMATION TO THE USER

The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

In order to meet FCC emissions limits, this equipment must be used only with cables which comply with IEEE 802.3.

CSA STATEMENT

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

VCCI STATEMENT

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

BCIQ STATEMENT

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Downloaded from www.Manualslib.com manuals search engine

Downloaded from www.Manualslib.com manuals search engine

Part No. DUA1679-0AAA03
Published July 2001

Downloaded from www.Manualslib.com manuals search engine